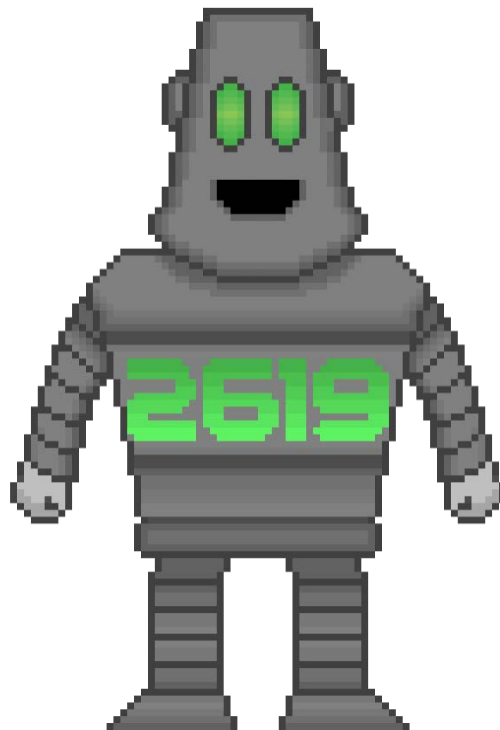




THE CHARGE MMDCXIX



**INSPIRING FUTURE
ENGINEERS!**



GREAT LAKES BAY SCIENCE AND ENGINEERING FESTIVAL



SINCE
2013

OVER
1000
KIDS

GOLFBOT
BICYCLE
MAGLEV
ROBOT

"SPARK"
KIDS

PROMOTE
STEM

MIDLAND DISTRICT BOT BASH

FIRST
of the
GREAT LAKES BAY REGION
PRESENTS



BOT BASH 2014



**INCREASED
TEAMS**

**BEST
DISTRICT**

**OFFSEASON
PRACTICE**

**RECRUIT AND
SPREAD STEM**



FIRST OF THE GREAT LAKES BAY REGION



2619 MENTOR
ESTABLISHED

SUPPORT
FIRST TEAMS

SHARE
RESOURCES

SHARE BUILD
SITES



SIEBERT SCIENCE FAIR

HOSTED BY 2619

PLANT SEEDS FOR
FUTURE RECRUITS

HELP JUDGE

GOLF BOT



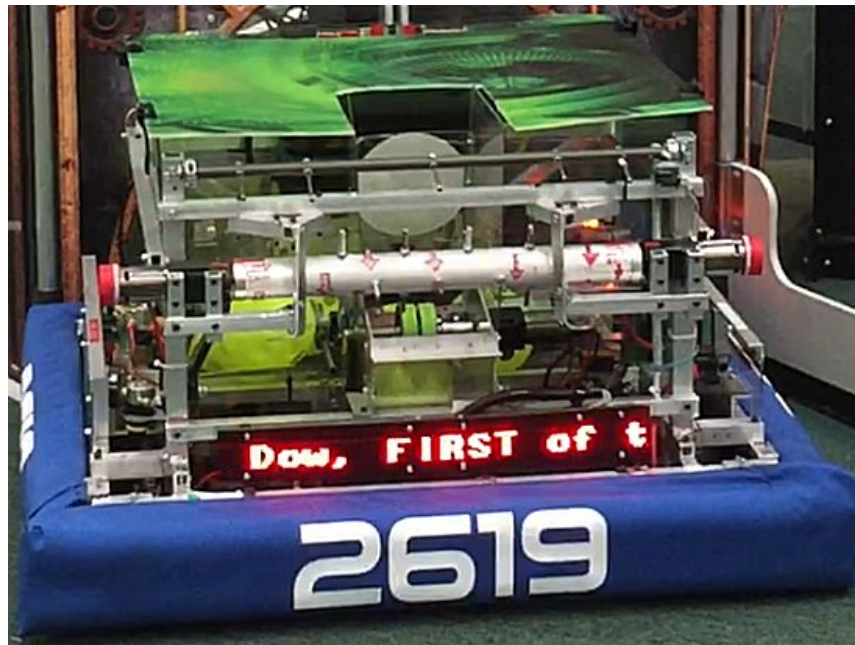
PROMOTE
DOW SYMBIO

HYDRAULICS
LEARNED

TRIBOLOGY
SHOW IN
ORLANDO

ALL OUR
SHOWINGS

THE RADD



CUSTOM
CIRCUIT

PORTABLE
VISIBLE

CAPTURES
INTETREST

TOTALLY
UNIQUE

EASY TO
LEARN
ELECTRICAL

ADULTS
AND KIDS

SPARKY AWARDS



BASED OFF
RADD

RECOGNIZE
OTHERS

FUN
PROJECT

PROGRAM
AT COMP

ATTRACTS
ATTENTION

INTRODUCE
SKILLS

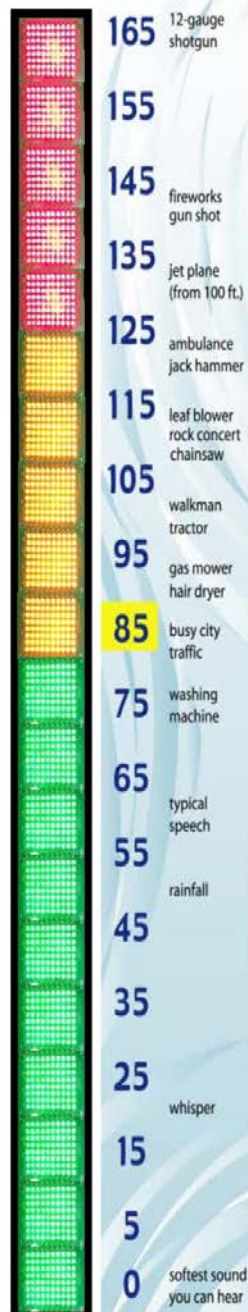
NOISE-O-METER

Noise-O-Meter

The Noise-O-Meter was an off-season project that team 2619 designed, fabricated, assembled and tested. Its purpose is to raise the awareness of sound levels in a dramatic fashion!

The Noise-O-Meter is a 20 segment sound level meter that uses an amazing 1,600 high brightness LEDs. It can be calibrated for a wide range of applications.

The graph to the right shows the Noise-O-Meter's calibration in dBA according to the NIOSH guidelines with yellow denoting the level of sound that hearing protection is recommended.



PROMOTE
SOUND
SAFETY

PROMOTE
ELECTRICAL
SKILLS

"LIGHT UP"
INTEREST
IN STEM

0 TO 120
DECIBALS

PORTABLE

ALL AGES

MIDDLE SCHOOL SOUND TALK



SOUND SAFETY
IMPORTANCE
NUMEROUS CLASSES

FIM ELECTRICAL BOXES

LACK OF SAFE POWER
DISTRIBUTION

FIM EXPANSION IN
MICHIGAN

2619 BUILDS BOXES FOR
THE STATE

STEM CAMP



WEEK LONG CAMP FOR
3rd TO 5th GRADERS

STEM IN A FUN MANNER

MAGLEV TRACK DEBUT

BUOYANCY,
ELECTRICITY,
MAGNETISM, AND MORE!

TRIPLED ENROLLMENT

MENTORING FTC TEAMS



THREE NEW
FTC TEAMS

PROVIDE
SUPPORT

SUPPLIES

BUILD
SPACE

PRACTICE
FIELD

SHOW FRC
LEVEL TO
PROMOTE
EFFORT

NEW
RECRUITS

HOST MOCK
COMP

CREATE
SOLIDARITY

GLBR PRACTICE FIELD

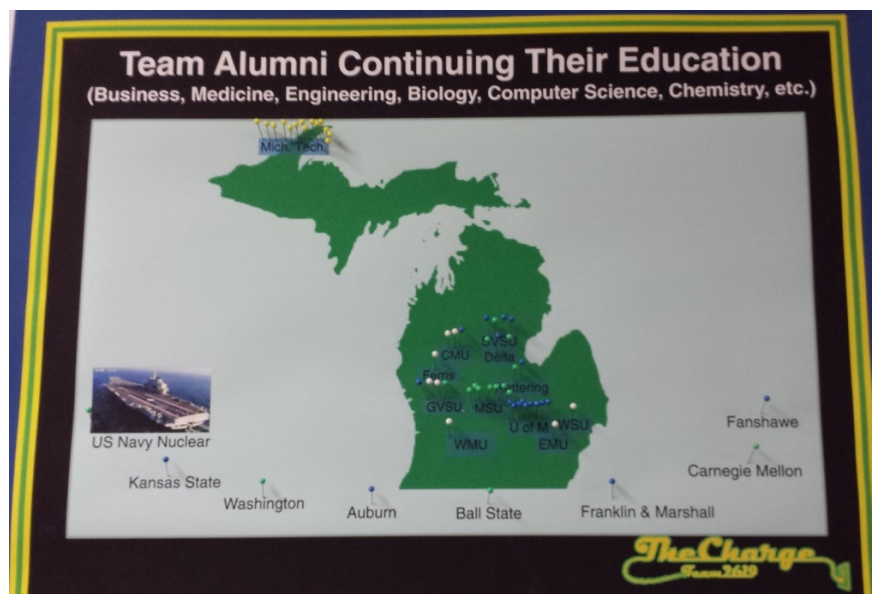
FTC AND FRC LEVEL

CREATE EACH YEAR IN
ROBOTICS CENTER GYM

FOR ALL TEAMS IN
REGION

CREATE SOLIDARITY

BEYOND 2619



SEEK OUT YOUTH STEM
RELATED PROGRAMS TO
AID IN CAREER CHOICE

BATTERY STUDY



Student Testing Batteries

RANK	Battery ID	RANK	Battery ID
1	2015-1	9	2014-1-A
2	2015-2	10	2012-3
3	2015-3	11	2014-4
4	2013-1	12	2014-1-B
5	2012-4	13	2013-3
6	2014-2	14	2014-3
7	2013-2	15	2012-1
8	2012-5	16	2010-4

Final Battery Rankings from Study

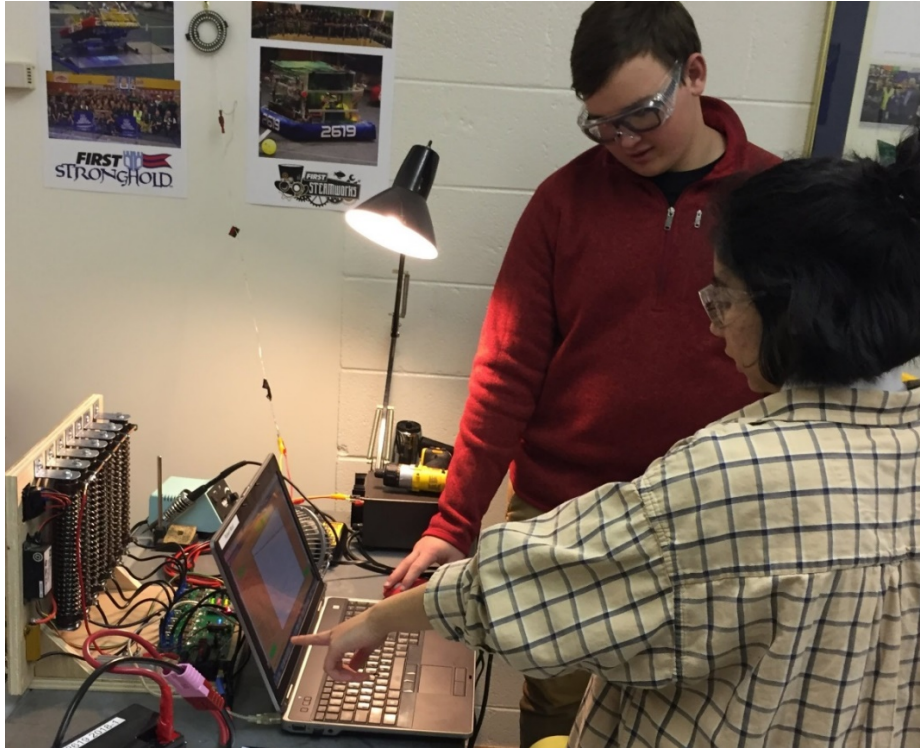
**"GOOD" BATTERY
FAILED**

EXTENSIVE RESEARCH

**DEVELOPED TESTING
METHOD**

**WROTE AND PUBLISHED
REPORT**

BATTERY STUDY II



FURTHER DEVELOPMENT

LESS THAN MINUTE
VERSUS OVER HOUR

SIMULATE REAL
MATCHES

NEW REPORT

SEMINAR AT
DETROIT CHAMPIONSHIP